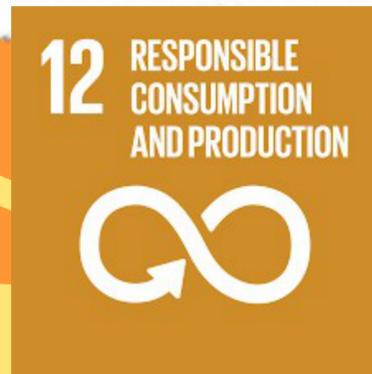


PP

polypoly plastic

global social leaders



our aims

Plastic waste is a critical issue which is most tangible for an urban environment like in the Bangkok community, with trash of all sorts visible on many public spaces and single-use plastic still prevalent in the public scene. We, PolyPoly Plastic, believe that change in consumer behaviour and environmental awareness can and must be nurtured as early as possible. Thus, we aim to work with students to together raise awareness about the issue, provide youthful, experimental campaigning solutions and change the way the community interacts with plastic waste. By doing this, we have and are tackling three SDG goals: quality education, responsible consumption and production, and climate action.



The Bicycle Shredder



To engage the community in the recycling process, we planned, discussed, and manufactured the first bicycle plastic shredder in Thailand outside of school. Numerous discussions with different NGOs, such as BOPESHOP, Precious Plastic Bangkok, Precious Plastic Shanghai and Magic Eyes Foundation. In addition, the local mechanics were required to gain sufficient information in order to manufacture a new machine, as well as teachers who advised us on the small significant details that we did not realise. Funding was a big challenge as the machine required a large amount of financial support. Through meetings with heads of school and support from the charity committee, we were able gain funding at last. After 4 months of time spent to check and improve the machine, we finally brought it into the school's workshop to assemble. The bicycle shredder is indeed the highlight of our project as we were able to engage more than 80 senior school students to help recycle plastic in a new, fun and healthy way. The shredder was a stepping stone for us and helped us think of innovative ways to further achieve our aim in current and other communities. Combined, we recycled more than 500 bottles of PET, PP and HDPE plastic over the two months period following the launch of donation boxes. Many are left unprocessed as the pandemic renders our operation and donation impossible.



Projects

Within the school community, we attempted to maximise student participation in the recycling process. Firstly, our weekly after-school activity ("you-time" as we call it) was aimed at younger senior school students who wanted to discover and explore ways of recycling plastic waste. In our you-time we had 15 participants from year 7 to year 10 over the span of 3 months, and overall an impact on 800 students in the school. Students had the opportunity to sort out bottle caps and bottles, shred them using the bicycle shredder, and experimented with the injection moulding machine to upcycle waste into jenga blocks, which we hope to complete once school opens and donate them to a local school. Our students also had the opportunity to design posters and recycling bins, and learn the technique of ironing plastic bags to give them a new purpose. These weekly sessions not only helped us gain new perspectives of the younger generation, but also provided an important leadership opportunity for us. Secondly, at the beginning of term 2 we introduced a recycling competition within each senior year group. This competition was aimed for students to contribute to the recycling process by bringing in plastic bottles and caps from home, and utilising the bicycle shredder to shred them into smaller pieces, which will then be donated to Jak Dang temple to turn into monk robes. We hope that this would inspire younger students to keep this recycling habit in their daily lives. Lastly, cooperating with Precious Plastic Bangkok has been one of our milestones. We were fortunate to have 'Precious Plastic Bangkok' bring in their machines for us, including the shredder and the extruder. During the week, senior students had the opportunity to experiment with these machines as well as making their own bowls and plant pots from plastic waste. We are looking forward to continuing our collaboration with Precious Plastic Bangkok in future events within and outside of school.



STEM Sustainability Day out ***STEM Sustainability Day out***

We have also been working on impacting others beyond our community. Throughout this academic year, we have been communicating with a Thai-Muslim school next to our school to host a STEM sustainability day out event involving year 6 and 7 students. In order to achieve this, we brainstormed, refined, and rehearsed our activities before finalising our plans ready for the event to be held in February. We were excited and proud to be leading our first official event involving over 80 students and teachers from two schools. Unfortunately, the current pandemic has stopped our event from proceeding, but we are planning to host the event in the next academic year. The objective of this event is to educate the younger generation on waste management and the impact of waste pollution on the environment, which will encourage students to make an impact within their community.

The event will include three main activities, including scavenger hunt, a waste-sorting competition, and a plastic upcycling station. Machines from Precious Plastic Bangkok as well as our own will be used in this event to produce plant pots which will be donated to the Thai-Muslim school. In addition, three mini science experiments will act as warm-up activities, such as analysing the contamination of Chao Phraya River in Bangkok and producing bioplastic. The impact of this event will be indicated by a quiz given to students before and after the activities. We received advice from teachers from different departments and held weekly meetings to allocate roles to each participant during the planning process. Although the event was not held, we have already gained a wonderful experience working with all participants, and collaborating with the Thai-Muslim school. Our leadership, organisation, and communication skills have certainly developed over this whole process.

During this quarantine period, we are planning ahead with our future events of holding an online panel discussion and an inter-school environmental conference in the next academic year. We hope to invite key speakers and form a discussion on different areas such as air quality, impact of COVID-19, and circular economy. Our journey has not been a smooth one, yet the experiences we gained along the way has been a valuable and memorable one.